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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Nurettin Burcak Beser

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EXAMINER

CHEA, PHILIP J

ART UNIT

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2153

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/667,978	Applicant(s) BESER, NURETTIN BURCAK	
	Examiner PHILIP J. CHEA	Art Unit 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-31 and 34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-31 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to an Amendment filed December 7, 2007. Claims 1,3-8,10-31,34 are currently pending. Any rejection not set forth below has been overcome by the current Amendment.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1,3-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Fijolek et al. (US 6,553,568), herein referred to as Fijolek.

As per claim 1, Fijolek discloses a method of allocating upstream resources to a plurality of cable modems, comprising:

grouping the plurality of cable modems into a plurality of groups based on quality of service requirements of each of the cable modems (see column 22, Table 17, describing the range of IP addresses according to service agreement groups, where the groups are based on quality of service requirements (e.g. Biz Gold, Biz Silver, Gold, Silver, and Premium) and then refer to column 23, lines 17-21, showing how a CM (i.e. cable modem) is assigned to one of the service level groups above);

ordering allocation of said upstream resources to each of the plurality of cable modems based on the group to which each of the cable modems belongs (see column 23, line 64 – column 24, line 20, describing ordering allocation of upstream resources by assigning a certain maximum upstream rate limit according to the group (e.g. Biz Gold gets 512K upstream versus Premium that only gets 40K upstream));

allocating said upstream resources to each of the cable modems based on the ordering (see column 24, lines 21-28, where the service level agreement groups are enforced on the cable modems).

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As per claim 3, Fijolek further discloses assigning initialization channels of the upstream resources to each of the plurality of cable modems based on the grouping of the cable modems (see column 23, lines 44-56).

As per claim 4, Fijolek further discloses assigning registration channels of the upstream resources to each of the plurality of cable modems based on the grouping of the cable modems (see column 24, line 59 – column 25, line 3).

As per claim 5, Fijolek further discloses that a first group of the plurality of groups comprises message transferring agents (see column 24, lines 39-41).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-31,34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fijolek et al. (US 6,553,568), herein referred to as Fijolek, and further in view of Zadikian et al. (US 6,912,221), herein referred to as Zadikian.

As per claims 6,13,30, although the system disclosed by Fijolek shows substantial features of the claimed invention (discussed above), it fails to disclose designating a first group of the plurality of groups as requiring said allocation of the upstream resources before other groups of the plurality of groups.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Fijolek, as evidenced by Zadikian.

In an analogous art, Zadikian discloses a need for allocating upstream resources in a descending order to prioritize a restoration sequence from highest priority to lowest priority (see column 6, lines 15-22). In considering the upstream resources it is obvious that the upstream is used since resources are

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temporarily stopped, the devices will try to log on (i.e. request service). That is, it will appear as an upstream to the device that is requesting service.

Given the teaching of Zadikian, a person having ordinary skill in the art would have readily recognized the desirability and advantages of modifying Fijolek's teaching of QoS groups by employing a prioritized order of allocation of upstream resources based on QoS, such as disclosed by Zadikian, in order to prevent all bandwidth resources from being used during restoration of a connection. Although Zadikian does not specifically mention a prioritization of groups, it would have been obvious to one of ordinary skill in the art that since Fijolek's system uses groups based on QoS, the highest priority group would be able to restore their connection first followed by the next QoS group.

As per claims 7,14,31, Zadikian further discloses designating a second group of the plurality of groups as being said allocated upstream resources subsequent to the first group (see column 6, lines 15-22, where it is implied that once the high priority connections are restored first, the next priority connections will be restored).

As per claims 8,34, Fijolek in view of Zadikian disclose a cable modem termination system (CMTS), comprising:

- a memory configured to store instructions (see Fijolek column 24, lines 33-36, implying a memory to store instructions for receiving requests for service level agreements); and

- a processing unit configured to execute the instructions in the memory to:

 - group a plurality of cable modems (CMs) into a plurality of groups based on quality of service requirements of each of the cable modems (see Fijolek column 24, lines 1-20), and

 - determine an order for allocating upstream resources to each of the plurality of CMs based on the group to which each of the CMs belongs (see Zadikian column 6, lines 15-22, and discussion of claim 6 above).

In considering a re-boot of the CMTS, Fijolek discloses that the CMTS can be booted (see column 12, lines 29-35, describing a boot record). It would have been obvious to one of ordinary skill in the art to realize that a CMTS can be re-booted if there exists a boot record. Since the CMTS provides the CM with connections based on service level agreements (see above), and Zadikian discloses

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restoring a connection based on priority levels (see above), it would be obvious that when a CMTS is booted, a sequence of restoring connections will be started based on the priority of the service level groups.

As per claims 17,19,22,24,27,28, Fijolek further discloses memory to group the plurality of CMs into the plurality of groups based on quality of service requirements of the CMs (see column 22, Table 17, describing the range of IP addresses according to service agreement groups, where the groups are (e.g. Biz Gold, Biz Silver, Gold, Silver, and Premium) and then refer to column 23, lines 17-21, showing how a CM (i.e. cable modem) is assigned to one of the service level groups above).

As per claim 10, Fijolek further discloses memory to allocate initialization channels of the upstream resources to each of the plurality of CMs based on the grouping of the plurality of CMs (see column 23, lines 44-56).

As per claim 11, Fijolek further discloses memory to allocate registration channels of the upstream resources to each of the plurality of CMs based on the grouping of the CMs (see column 24, line 59 – column 25, line 3).

As per claims 12,29, Fijolek further discloses that the groups comprise message transferring agents (see column 24, lines 39-41).

As per claims 15,20,25, Fijolek in view of Zadikian disclose

[claim 20] a memory to store instructions (see Fijolek column 24, lines 33-36, implying a memory to store instructions for receiving requests for service level agreements);

receiving upstream resource requests from a plurality of cable modems, each of the resource requests comprising an address associated with a cable modem of the plurality of cable modems (see Fijolek column 24, lines 33-38);

determining an order that the upstream resources are to be assigned to each of the plurality of cable modems based on the address of each of the resource requests (see Zadikian column 6, lines 15-22, and discussion of claim 6 above);

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allocating the upstream resources based on the determined order (see column 24, lines 21-28, where the service level agreement groups are enforced on the cable modems). Given the teaching of Zadikian, the enforcement and allocation would be based on the determined order of priority.

As per claim 16,21,26, Fijolek discloses that the address comprises a medium access control (MAC) address (see column 24, lines 33-38).

As per claims 18,23, Fijolek discloses allocating the upstream resources to each of the plurality of cable modems based on a group of the plurality of groups to which each of said cable modems belongs (see discussion of claim 6 above).

Response to Arguments

5. Applicant's arguments filed December 7, 2007 have been fully considered but they are not persuasive.

A) Applicant contends that Fijolek does not disclose ordering allocation of upstream resources to each of a plurality of cable modems based on a group to which each of the cable modem belongs, and allocating upstream resources to each of the cable modems based on the ordering.

In considering A), the Examiner respectfully disagrees. Fijolek discloses an order of upstream resources that is allocated to each of the groups of cable modems based on quality of service the modem belongs to because the cable modems are grouped into quality of service groups (e.g. Biz Gold, Biz Silver, Gold, etc.). These groups each have their own quality of service associated with them. For instance Biz Gold gets allocated 512K upstream versus Premium that only gets 40K upstream (see column 23, line 64 – column 24, line 20). It is clear that the Biz Gold has a higher order for allocated upstream resources because it is allocated a higher upstream speed. Fijolek further discloses allocating the upstream resources to each of the cable modems based on the ordering because the quality of service is enforced on the cable modems. That is, the quality of service is allocated to the modem based on group it is in. For example, the Biz Gold group will be allocated the higher order of quality of service than the Premium.

B) Applicant contends that Fijolek in view of Zadikian do not disclose memory to determine an order for allocating upstream resources to each of the plurality of CMs based on a group to which each of the CMs belongs.

In considering B), the Examiner respectfully disagrees. Fijolek discloses that the CMs can be put into groups based on quality of service (e.g. Biz Gold, Biz Silver, Gold, Premium, etc.). Zadikian discloses restoring failed connections based on quality of service to prioritize a restoration sequence from highest priority to lowest priority (see column 6, lines 15-22). Since the connections are being restored, it is inherent that the connections are being allocated. And since they are being allocated in order of highest priority to lowest priority, it reads on the claimed limitation of determining an order for allocating resources. Therefore, the Examiner believes that one of ordinary skill in the art would allocate the upstream resources based on the quality of service groups. So the Gold Biz group of 512K would be allocated before the Premium group of 40K.

C) Applicant contends that Fijolek in view of Zadikian do not disclose determining an order that the upstream resources are to be assigned to each of a plurality of cable modems based on an address of each of the resource requests.

In considering C), the Examiner respectfully disagrees. Fijolek discloses grouping CMs in groups based on addresses and quality of service (see column 22, Table 17, *showing the range of IP addresses according to service agreement groups*). Since Zadikian shows ordering allocation of resources based on the quality of service (see discussion above), it is obvious that the allocation of resources are based on an address of each of the resource requests because Fijolek shows a certain IP address belongs to a certain group which belongs to a certain quality of service group. Therefore, based on the IP address, the CM will be allocated its resources. For example, if a CM had an address of 24.4.56.1 and that address belonged into the Biz Gold group

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(see Fijolek column 22, Table 17), it is obvious it would be allocated resources before a CM with an address of 24.4.26.1 that belonged into the Premium group.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP J. CHEA whose telephone number is (571)272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Glenton Burgess/
Supervisory Patent Examiner, Art Unit 2153

Philip J Chea
Examiner
Art Unit 2153

PJC 2/25/08